

mHealth for Men: Development of a home-based intervention to test and start (HITS) to support HIV testing and early linkage to care amongst men in rural KwaZulu-Natal, South Africa

Thembelihle Zuma on behalf of the HITS working group

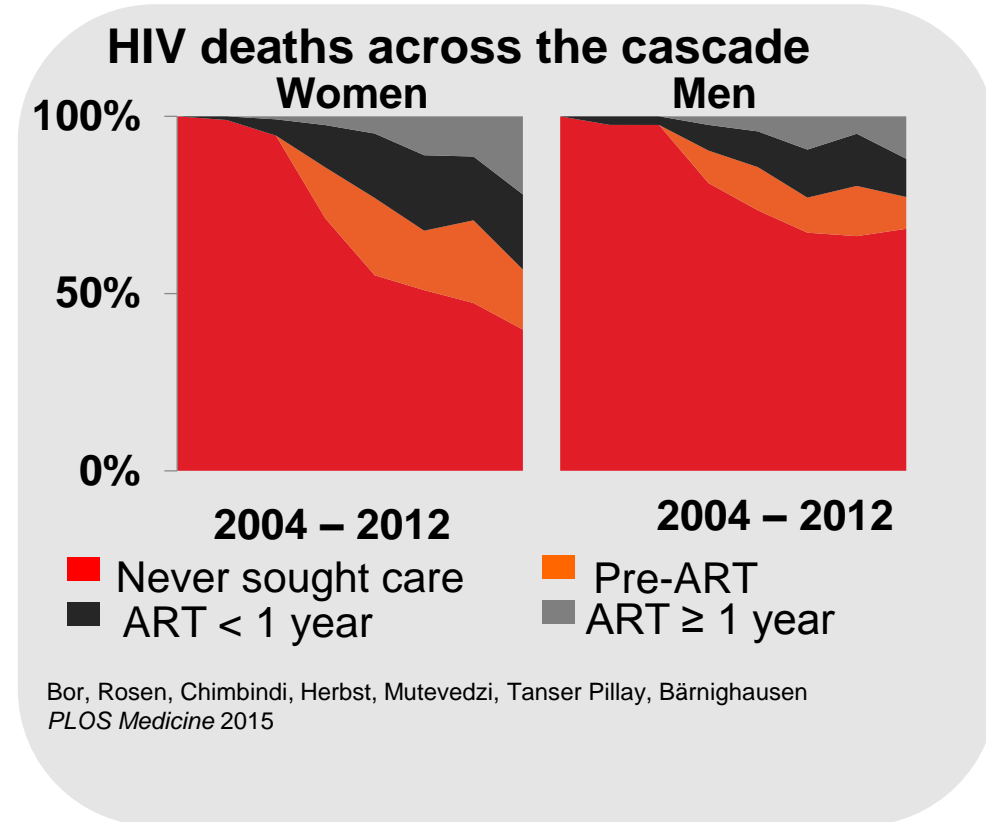
Oluwafemi Adeagbo, Thulile Mathenjwa, Anya Zeitlin, Philippa Matthews, Janet Seeley, Till Bärnighausen, Deenan Pillay, Nuala McGrath, Ann Blandford, Frank Tanser, Maryam Shahmanesh and Sally Wyke

Filling the Gaps in Best Practices and Innovations for HIV Programming Meeting

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Introduction

- UNAIDS ambitious 90-90-90 strategy was launched in 2014 to reduce the burden of HIV globally
- However, research evidence from KwaZulu-Natal - particularly in rural areas demonstrates men's underutilisation of HIV care services despite its availability at no cost
- Men's HIV mortality is high and many of those under 30 years remain undiagnosed
- We aimed to increase men's intrinsic motivation to test and link to care via an application called Empowering People through Informed Choice for HIV (EPIC-HIV)



Two apps:

One to support testing.

Offered if a participant declines to test or indicates they are uncertain/not ready.

One to support linkage.

Participant is visited if they did not link to care within the agreed target time.

Methodology

Person-based Approach

EPIC

1. Identify key issues for EPIC to address

- Literature review and secondary analysis of existing data

2. Formulate design principles and essential features EPIC should include

- Discussion with content developer and desk-based mapping to Self – Determination Theory and Behaviour Change Taxonomy

3. Assessing content and design from user-perspective

- Testing for a) content; b) usability

Community Advisory Board (CAB) and community groups including (n=18) male participants aged 26-67 years.

Michie S, et al. The Behavior Change Technique Taxonomy (v1) of 93 Hierarchically Clustered Techniques:.. *ann behav med* 2013; **46(1): 81-95**.

PHASE 1: Key issues for EPIC to address

Example of coding data and literature to issues

Evidence for key issues that EPIC is trying to address:

Paper
coding
format:

Literature Synthesis: Qualitative Review	Literature synthesis: Quantitative Review	Literature synthesis: Mixed methods	Secondary analysis used in development of EPIC (Uvo lwakho)	Existing Research Team Knowledge	Editorial Opinion Papers
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Issue	Key behaviour	Key References	Key finding
Supply issues	Clinics 'feminised' spaces where men do not feel comfortable	Cox, V., Campbell, A., Raphahlelo, N., McIntyre, J., & Rebe, K. (2013).	77% of the respondents would attend male clinic for ART initiation within one week 99% preferred attending male only clinics for ART services, even if waiting time increased 49% avoided clinic attendance because of female staff
		Groh, K., Audet, C. M., Baptista, A., Sidat, M., Vergara, A., Vermund, S. H., & Moon, T. D. (2011). Barriers to antiretroviral therapy adherence in rural Mozambique. BMC public health, 11(1), 650. DOI: 10.1186/1471-2458-11-650	Men expressed a greater concern about poor treatment by health care workers than women (83% men vs. 0% women).
		Secondary analysis: Unpublished Uvo lwakho data	"Females go for testing if they are infected they go to the clinic and get treatment, but as males we don't like to visit the clinic" (22-year-old male unemployed)
		Heestermans, T., Browne, J. L., Aitken, S. C., Vervoort, S. C., & Klipstein-Grobusch, K. (2016). Determinants of adherence to antiretroviral therapy among HIV-positive adults in sub-Saharan Africa: a systematic review. BMJ global health, 1(4), e000125. 10.1136/bmjgh-2016-000125	Dissatisfaction with healthcare facility and healthcare workers
	Lack of confidentiality if seen in clinic	Groh, K., Audet, C. M., Baptista, A., Sidat, M., Vergara, A., Vermund, S. H., & Moon, T. D. (2011). Barriers to antiretroviral therapy adherence in rural Mozambique. BMC public health, 11(1), 650. DOI: 10.1186/1471-2458-11-650	Community participants in focus groups noted a lack of confidentiality and poor treatment by hospital staff (42%)
		Secondary analysis: Unpublished Uvo lwakho data	"If you meet a person at clinic when they leave they will go around saying they saw me in that room maybe I was there for testing. They will say so and so is now eating it (taking treatment) has to be because she was dating so and so" (42-year-old male, PLHIV)

1. Key issues for EPIC to address

Supply side	Demand side
Clinics 'feminised' spaces where men do not feel comfortable	Concern that if HIV+ will be shunned, presence of stigma whereby HIV not openly discussed
Lack of confidentiality if seen in clinic	Fear of death and illness
Long waits at busy clinics put men off going	Concern that if HIV+ will be 'blamed' for sexual 'misconduct' and isolated from family
Clinics open at times men find it difficult to go there	Feeling healthy (so not understanding the need for a test),
Poor relationships with health care workers	A preference for traditional medicine
	The need to maintain 'reputational' identity, at least with other men, as strong, with capacity for hard work and earning potential, and sexual prowess
	The ability to maintain 'respectable' identity as healthy and able to provide for a family.
	Belief that medicine should be curative. Concept of lifelong chronic illness relatively a new idea.....use of ART even if asymptomatic

PHASE 2: Design principles and essential features

Design Objectives – intervention features

Design objectives that address each issue	Key intervention features relevant to each design objectives
1. To persuade men it is best to know your HIV status – because it allows you to take control	Persuading users that knowing status allows them to take control of important aspects of their lives (such as upholding traditional values, caring for a family or having sex and children)
2. To allow/engage men to see a positive future with HIV – in which they are in control and can achieve their ambitions	Maintaining a positive illness context throughout – that it is easily possible to live with HIV and do all one wants to do Educating men about HIV and the benefits of testing and taking ART
3. To persuade men that attending the clinic can be managed and is worth it – in the long term.	Persuade men that they can handle going to the clinic through positive examples of men talking about what it was like and how they managed it.





Guide character
– nurse S'thembiso

*'I know that
they will be*

'So here, I



My name is S'thembiso

'I have been a nurse for many years now'

*'I know whether or not to test for HIV -
and about its treatment.'*

9.1C serious

*'I share my own and experiences for
you to help you decide''*

NEXT


GUIDE CHARACTER



**Touch the ones you would
like to hear more of!**

Text in bold only visible – italics audio only.
Click to hear voices spoken at low volume –
like thinking out loud to self


8.1E I couldn't have HIV

 **8.2E** "I haven't had sex for months and I really
don't think I had sex with any woman who had
HIV in the past"


8.3F I couldn't have HIV

8.4F "I tested negative 3 months ago and have not
had sex since. In addition, I know my last partner
was negative as we tested together."


8.1B I will wait and see if I get sick

 **8.2B** "I do worry I might have HIV
but I would rather wait until I get sick, before
testing. People will think I am weak if they learn
I have HIV" *


8.3B I am well – and am too busy!

 **8.4B** "I feel well and am busy with my
life. Its easier not to know if I have HIV."


8.1A I am taking immune boosters

 **8.2A** "I have been seeing a Sangoma who has
given me medicine to keep my immune system strong.
And I feel fine!"

8.3A I worry about being judged

 **8.4A** "I have had sex with other men, and I am
worried that will become known if I test positive for HIV"

8.1E I couldn't tell my partner

 **8.2E** "If I have HIV, people – my wife - will find out
have been unfaithful"

Guide character

PHASE 3: Assessing content & design from user-perspective

User-perspective

1. Testing content

Think aloud evaluations with the Community Advisory Board and community groups

2. Usability evaluations

Usability evaluations with the target user group

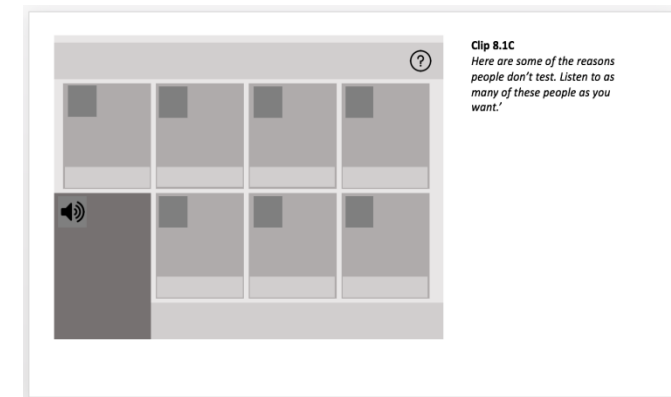
3. Iterative improvements

Interleave testing, evaluation and design to ensure the app meets the devised design principles



EPIC 1: Usability Evaluations

Example design changes for iteration 2



Lessons Learnt

- The App is on a tablet, handed to the participant

Questions not directly asked of participant; not a data collection tool

All written words are also spoken (audio)

- ✓ Supports feelings of autonomy

- ✓ Don't have to perform / respond to anyone else

- Narratives differ for age groups, explicitly respects participants own choices

- ✓ Support feelings of relatedness

- ✓ Support feelings of competence

- ✓ Improve understanding

- ✓ Authentic experiential information

- Use of short personal accounts

- ✓ Could support feelings of relatedness

- ✓ Feelings of autonomy

- ✓ Prevent defensive processing

- ✓ Improve understanding

- ✓ Authentic experiential information

Take away messages and recommendations

1. Point 1

- App addresses issues specific to men
(privacy, confidentiality, dealing with gender-relational dynamics, and disclosure issues)

2. Point 2

- App encourages personal, private, engagement with the choices

1. Point 3

- Formative work conducted prior to implementation, improve iterations of the intervention prior to implementation

Thank you

Questions
Comments

